WHAT IS CLAIMED IS:

1. An apparatus for sputter deposition of a film layer onto a substrate, comprising:

a vacuum chamber having a substrate support member maintainable therein;

a first biasable target disposed in said chamber; and

a second biasable target disposed in said chamber adjacent to and extending substantially around a space defined between said target and said substrate support.

2. The sputter deposition apparatus of claim 1, further including a first power supply connected to said first target and a second power supply connected to said second target.

3. The sputter deposition apparatus of claim 2, wherein said second power supply is an AC power supply.

4. The apparatus of claim 1, further including a third biasable sputter target disposed about said space defined between said first sputter target and said substrate support.

5. The apparatus of claim 4, wherein said third sputter target is DC biased.

6. The apparatus of claim 1, wherein said second target inductively couples into a gas maintainable in said chamber to create a plasma therefrom.

7. The apparatus of claim 6, wherein said third target is negatively biased to provid sputtering thereof by said plasma.

8. The apparatus of claim 7, wherein each of said targets is of the same material.

9. The apparatus of claim 1, wherein said second target is a solid member.

10. The apparatus of claim 7, wherein said third target is a solid member.

11. An apparatus for energizing a plasma within a semiconductor fabrication system to sputter material onto a workpiece, the apparatus comprising:

a semiconductor fabrication chamber having a plasma generation area within said chamber; and

a metal material coil carried by said chamber and positioned to couple energy into said plasma generation area and to sputter metal material from said coil onto said workpiece.

12. The apparatus of claim 11 further comprising a target made of titanium.

13. The apparatus of claim 11 further comprising a target made of a material selected from Al, Cr, Te and SiO_2.

14. An apparatus for energizing a plasma within a semiconductor fabrication system to sputter material onto a workpiece, the apparatus comprising:

a semiconductor fabrication chamber having a plasma generation area within said chamber;

a sputtering target carried within said chamber and made of a first material, said target being positioned to sputter said target material onto said workpiece; and

a coil carried within said chamber and formed of the same type of material as said target, said coil being positioned to couple energy into said plasma generation area and to sputter said coil material onto said workpiece so that both said coil material and said target material are deposited on said workpiece to form a layer thereon.

15. The apparatus of claim 14 wherein said coil material is deposited on at least a portion of said workpiece at a rate of at least 50 Å per minute.

16. The apparatus of claim 14 further comprising:

a source for applying a DC bias to said target;

a source for applying a DC bias to said workpiece; and

a generator for applying RF power to said coil;

wherein the power of said target DC bias and said coil RF power have a predetermined relationship so that said coil material deposited on said workpiece compensates for nonuniformity in thickness of said target material deposited on said workpiece.

17. The apparatus of claim 16 wherein the ratio of said coil RF power to said target DC bias power is approximately 1.5.

18. A method of depositing material on a workpiece in a sputter deposition chamber, comprising

sputtering target material onto said workpiece from a target positioned in said chamber;

sputtering coil material onto said workpiece from a coil positioned adjacent said workpiece; and

wherein said coil is inductively coupled to a gas in the chamber.

19. The method of claim 18 further comprising adjusting the ratio of RF power applied to said coil relative to the DC power applied to said target to compensate for nonuniformity in thickness of said target material being sputtered onto said workpiece from said target.

20. The method of claim 19 wherein said ratio is approximately 1.5.

21. The method of claim 18 wherein said target material and said coil material are the same type of material.

22. The method of claim 18 wherein said target material and said coil material are different types of material.

23. The method of claim 18 wherein said target material and said coil material are sputtered in quantities which compensate for nonuniformities in thickness of said target material sputtered onto said workpiece.

24. The method of claim 18 wherein said target material and said coil material are sputtered at different rates.

25. The method of claim 23 wherein said coil material is deposited on at least a portion of said workpiece at a rate of at least 50 Å per minute.

26. An apparatus for energizing a plasma within a semiconductor fabrication system to sputter material onto a workpiece, the apparatus comprising:

a semiconductor fabrication chamber having a plasma generation area within said chamber;

a first target carried within said chamber and made of a first material, said first target being positioned to sputter said target material onto said workpiece;

a coil positioned to couple energy into said plasma generation area; and

a second target carried by said chamber spaced from the first target and formed of the same type of material as said first target, said second target being positioned to sputter said second target material onto said workpiece so that both said second target material and said first target material are deposited on said workpiece to form a layer.

27. The apparatus of claim 26 wherein said second target material is deposited on at least a portion of said workpiece at a rate of at least 50 Å per minute.

28. The apparatus of claim 26 wherein said coil is formed of the same type of material as said first target, said coil being positioned to sputter said coil material onto said workpiece so that said coil material together with said first and second target materials are deposited on said workpiece to form a layer.

29. The apparatus of claim 26 wherein said second target is a closed ring.

30. The apparatus of claim 26 wherein said second target is a cylinder.

31. The apparatus of claim 26 further comprising:

a source for applying a DC bias to said first target;

a source for applying a DC bias to said second target; and

a generator for applying RF power to said coil;

wherein the power of said first target DC bias and said second target DC power have a predetermined relationship so that said second target material deposited on said workpiece compensates for nonuniformity in thickness of said first target material deposited on said workpiece.

32. The apparatus of claim 26 wherein said coil and said second target each have a plurality of rings interleaved with rings of the other.

33. A method of depositing material on a workpiece, comprising

energizing a plasma with RF energy from a first coil;

sputtering target material onto said workpiece from a target positioned above said workpiece; and

sputtering coil material onto said workpiece from a second coil positioned adjacent said workpiece.

34. The method of claim 33 further comprising adjusting the ratio of DC power applied to said second coil relative to the DC power applied to said target to compensate for nonuniformity in thickness of said target material being sputtered onto said workpiece from said target.

35. The method of claim 33 wherein said target material and said second coil material are the same type of material.

36. The method of claim 33 wherein said target material and said second coil material are sputtered in quantities which compensate for nonuniformities in thickness of said target material sputtered onto said workpiece.

37. The method of claim 36 wherein said second coil material is deposited on at least a portion of said workpiece at a rate of at least 50 Å per minute.

38. The method of claim 35 wherein said first coil is formed of the same type of material as said target, said first coil being positioned to sputter said first coil material onto said workpiece so that said first coil material together with said second coil material and said target material are deposited on said workpiece to form a layer.

39. The method of claim 36 wherein said first coil material and said second coil material are deposited on at least a portion of said workpiece at a combined rate of at least 50 Å per minute.

40. The method of claim 33 wherein said first and second coils each have a plurality of turns interleaved with turns of the other coil.

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